

**REMARKS**

Upon entry of the foregoing amendments, claims 5, 7, 9, 11, 12, 32, 33, 36, 41-43, 46, 47, 49-55 are pending in the application. Claims 6, 8, 10, 13-31, 34-35, 37-40, 44, 45, 48, and 56 are cancelled without prejudice to or disclaimer of the subject matter therein. Claims 1-4 were previously cancelled. Claims 5, 7, 9, 11, 32, 36, 41, 46, 50, 52, and 53 are sought to be amended. No new matter is introduced by these amendments and their entry is respectfully requested.

In view of the below remarks, Applicants believe the claims are in condition for allowance and reconsideration is respectfully requested.

**Allowable Subject Matter**

Applicants acknowledge with appreciation for the Examiner's indication that claims 50-55 are allowable.

**Specification**

Pages 1, 3-4, 8-9, 11-15, 20, 32, 44-49, 55, 65-70, 73-78, and 82 of the Specification were objected to because there are inerasable marks. The Examiner's objection is noted; however, Applicants respectfully request that the Examiner reconsider and withdraw this objection because a clean (without those marks) copy of the Specification is available as U.S. Publication No. 2002/0015532.

**Rejections under 35 U.S.C. § 102**

Claims 5-13, 32-39, 46-49, and 56 were rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by U.S. Patent No. 5,862,262 to Jacobs *et al.* ("Jacobs"). Applicants respectfully traverse this rejection. Claim 56 is cancelled, thereby rendering its rejection moot.

Claim 5 is patentable over Jacobs because Jacobs does not teach or suggest "representing said catastrophe with a canonical polynomial," as recited in claim 5. Claim 7 is patentable over Jacobs because Jacobs does not teach or suggest "creating a canonical polynomial surface for at least one catastrophe in at least one of said blocks of pixels," as recited in claim 7.

Similarly, claim 11 is patentable over Jacobs because Jacobs does not teach or suggest “characterizing the mapping with a polynomial,” as recited in claim 11. Claim 46 is patentable over Jacobs because Jacobs does not teach or suggest “compressing the image by characterizing aspects of segments of the image with singular manifold representations represented by canonical polynomials,” as recited in claim 46.

In rejecting the polynomial features of each of the above claims, the Examiner asserted that FIG. 2 of Jacobs “shows x, y, z, coordinates as polynomial representing the area in the image.” Office Action, p. 4. The Examiner further asserted that Col. 4, lines 39-45 of Jacobs show a “mapping process in which x, y, z, coordinates system is used to define a domain  $D_i$  which is a subset of area of the image, polynomial/function  $f(x,y,z) \dots$ ” *Id.* Applicants respectfully disagree with the Examiner's assertion.

Jacobs merely describes a graphical representation using x,y,z coordinates. Nothing in Jacobs indicates that a representation of a “plurality of data points having (x,y,z) coordinates” is a polynomial function or expression. Applicants note that a position data of a point in 3-D space is not necessarily a polynomial function or expression. Accordingly, Jacobs does not teach or suggest the polynomial features of claims 5, 7, 11, and 46.

Therefore, claims 5, 7, 11, and 46 are patentable over Jacobs for at least these reasons. Claims 6, 8-10, 12, 13, 32-39, and 47-49 depend from one of claims 5, 7, 11, and 46 and are thus patentable over Jacobs for at least the reasons provided, and further view of their own features. Applicants respectfully request that the Examiner reconsider and withdraw this rejection.

### **Rejections under 35 U.S.C. § 103**

Claim 40-45 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Jacobs. Applicants respectfully traverse this rejection. Claims 40, 44, and 45 have been cancelled thereby rendering their rejection moot.

Claims 41-43 depend from independent claim 7 and are thus patentable over Jacobs for at least the reasons provided with respect to claim 7. Applicants respectfully request that the Examiner reconsider and withdraw this rejection.

**CONCLUSION**

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 18-1953 referencing the Atty. Docket No. noted above. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

By: 

Young A. Tang

Registration No.: 55,665

SHEPPARD MULLIN RICHTER &  
HAMPTON LLP  
333 South Hope Street, 48th Floor  
Los Angeles, CA 90071-1448  
Telephone: (858) 720-8900  
Facsimile: (858) 509-3691